

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) ~~A The frequency allocation scheme for optical channels transmitted via a WDM transmission line with alternating left side and right side filtering for adjacent channels, comprising:~~

~~channels with alternating channel spacing of A and B, where $A < B$,
two sets of channels orthogonally polarized, and according to claim 2, further comprising
means at a receiver for ~~alternately~~ alternating left-side and right-side filtering sidebands of the adjacent channels.~~

2. (Currently Amended) A frequency allocation scheme for optical channels transmitted via a WDM transmission line with alternating left side and right side filtering for adjacent channels, comprising:

channels with alternating channel spacing of A and B, where $A < B$, and
two sets of channels orthogonally polarized,
where the two sets of orthogonally polarized channels are shifted versus each other by a value $A/2 + \delta_{\text{Filter}}$, $\pm 20\%$.

3. (Currently Amended) A transmission system with a transmitter function, a transmitting fiber and a receiver function, wherein:

the transmitter function comprises polarized light sources (1), with modulators (2) and a wavelength multiplexer (3); and

the receiver function comprises at least a polarization demultiplexer (11), a wavelength demultiplexer (5), filters and electrical receivers,

said filters performing alternating left-side and right-side filtering for adjacent received channels which are ~~transmitted~~ transmitted, via a WDM transmission ~~line~~ line, with alternating channel spacing of A and B where $A < B$, and

two sets of the channels being orthogonally polarized and shifted versus each other by a value $A/2 + \delta_{\text{Filter}}$, $\pm 20\%$.